

Appl. No. 10/633,325
Amdt. Date: December 16, 2005
Reply to Office Action of July 20, 2005

Amendments to the Specification:

Please replace the first paragraph, page 1, with the following amended paragraph:

This application claims the benefit of U.S. Provisional Application Serial No. 60/60/400,649 60/400,649, filed August 2, 2002, and U. S. Provisional Application Serial No. 60/475,131, filed June 2, 2003, which applications are incorporated herein by reference.

Please replace the last paragraph, page 3, with the following amended paragraph:

The instant invention comprises a method of utilizing nicotine and/or nicotinic acetylcholine receptor agonist (nAChR) to stimulate, recruit and mobilize new muscle cells to augment, strengthen, or replace muscle cells in a mammalian body. [[.]] This is accomplished by administering nicotine to a mammalian body in amounts sufficient to stimulate, recruit and mobilize muscle cells to a specific muscle mass. The muscle cells may be differentiated from stem cells which may be endogenous or exogenous. The muscle cells are recruited to a specific area muscle mass of the body by training exercise. The training exercise results in the specific muscle group mass exceeding the cell replenishing effects of a normal life style. The training exercise causes an abnormal physiologic response in the specific muscle group mass, thereby causing release of various ~~metabolic~~ metabolites, catecholamine catecholamines, cytokines, chemokines, and/or an inflammatory response to further enhance the increase of tissue mass. Such an abnormal physiologic response in a muscle group cause the muscle cells to express nicotinic acetylcholine receptors. Nicotine or nicotine acetylcholine receptor agonist is used to

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bind the receptors. Binding stimulates the release of growth factors, including human growth hormone (HGH), vascular endothelial growth factor (VEGF), basic fibroblast growth factors (bFGF) and other chemokines, cytokines and attractants to stem cell recruitment, migration and mobilization at the target physiologic tissue or muscle group. The stem cells differentiate into the phenotype of the mobilized target muscle group or physiologic tissues.